



MaaS360 On-Premises

Database Virtual Appliance Setup Guide



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Introduction

Maas360 On-Premises requires an Oracle database as part of its architecture. For deployments lacking an Oracle database, a virtual appliance is available to quickly set up a trial database. This document describes the installation procedure for this Database Virtual Appliance.

The Database Virtual Appliance can be used to trial Maas360 On-Premises only. It is not intended for production use. In a production setting, Maas360 On-Premises requires a full Oracle database version 11.2.0.3.0. The database virtual appliance is not production hardened. It is not intended to be used as a long term database solution.

If your deployment contains an Oracle Database version 11.2.0.3.0, you do not need to install the Database Virtual Appliance.



Hardware Requirements

The following hardware components are required to install the MaaS360 Database Virtual Appliance.

1. MaaS360 On-Premises requires a VMware server. Refer to the MaaS360 On-Premises Installation Guide for the specifications of this server.

The Database Virtual Appliance can be installed on the same VMware Server that runs your MaaS360 On-Premises deployment. Note that because a licensed Oracle database is implemented, your server must be in compliance with your Oracle license.

2. This setup guide assumes you are using a Windows computer to deploy and configure the Database Virtual Appliance.



Software Requirements

The following Software tools and licenses are required before beginning installation of the Maas360 On-Premises Database Virtual Appliance:

1. Oracle Standard Edition One Linux Version 11.2.0.1.0 (64 bit) or 11.2.0.3.0 (64 bit) trial or full license.

The Maas360 On-Premises Database Virtual Appliance is provided for trial purposes only. Oracle provides a trial license for v11.2.0.1.0. A production environment cannot rely on the Database Virtual Appliance. After trialing Maas360 On-Premises, a full Oracle DB deployment is necessary.

2. Download the two Oracle Database 11g Release 2 files for Linux x86-64, v11.2.0.1.0, from the [Oracle download site](#):

- linux.x64_11gR2_database_1of2.zip
- linux.x64_11gR2_database_2of2.zip

NOTE: If you have a full Oracle license, and have access to v11.2.0.3.0, download the matching files, p10404530_112030_Linux-x86-64_1of7.zip and p10404530_112030_Linux-x86-64_2of7.zip from your Oracle account.

3. VMware vSphere client.

4. Remote Connection Tools to connect to the database virtual machine.

This setup guide provides instructions for connecting to the database VM, from a Windows host, using WinSCP, a free remote connection tool. WinSCP can be downloaded from the [WinSCP Download Page](#).

5. Maas360 On-Premises Database Virtual Application package, MaaS360-db-`<version number>`.ova.

The OVA package is available from the Fiberlink FTP site. The FTP credentials are available from your Fiberlink representative.

6. An available Static IP in your DMZ for the database virtual machine. If the VM is not in your DMZ, port 1521 must be open.

7. IP addresses for the following elements of your network:

- DNS Servers
- Subnet Mask
- Default Gateway



Install the MaaS360 Database Virtual Appliance

The first step in setting up the Database Virtual Appliance is to deploy it on your VMware server. These instructions assume you are using the VMware vSphere client to access your VMware server.

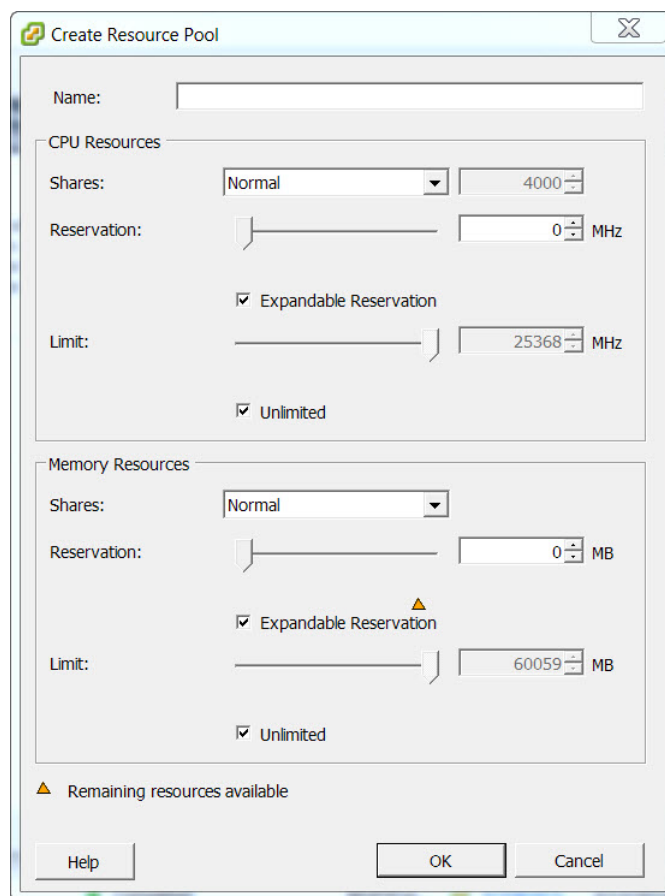
The MaaS360 Database Virtual Appliance OVA must be downloaded from the Fiberlink FTP before proceeding.

Create a Resource Pool

A VMware resource pool is a pre-requisite for the successful deployment of the vApp. You may import an existing resource pool or deploy one from the VMware vSphere client.

To deploy a Resource Pool, perform the following steps from the vSphere client, connected to your VMware Virtual Center:

1. Navigate to ESXi host designated for MaaS360 vApp deployment using VMware vSphere client.
2. Right click and select **New Resource Pool...** from the drop down menu. The **Create Resource Pool** window appears.



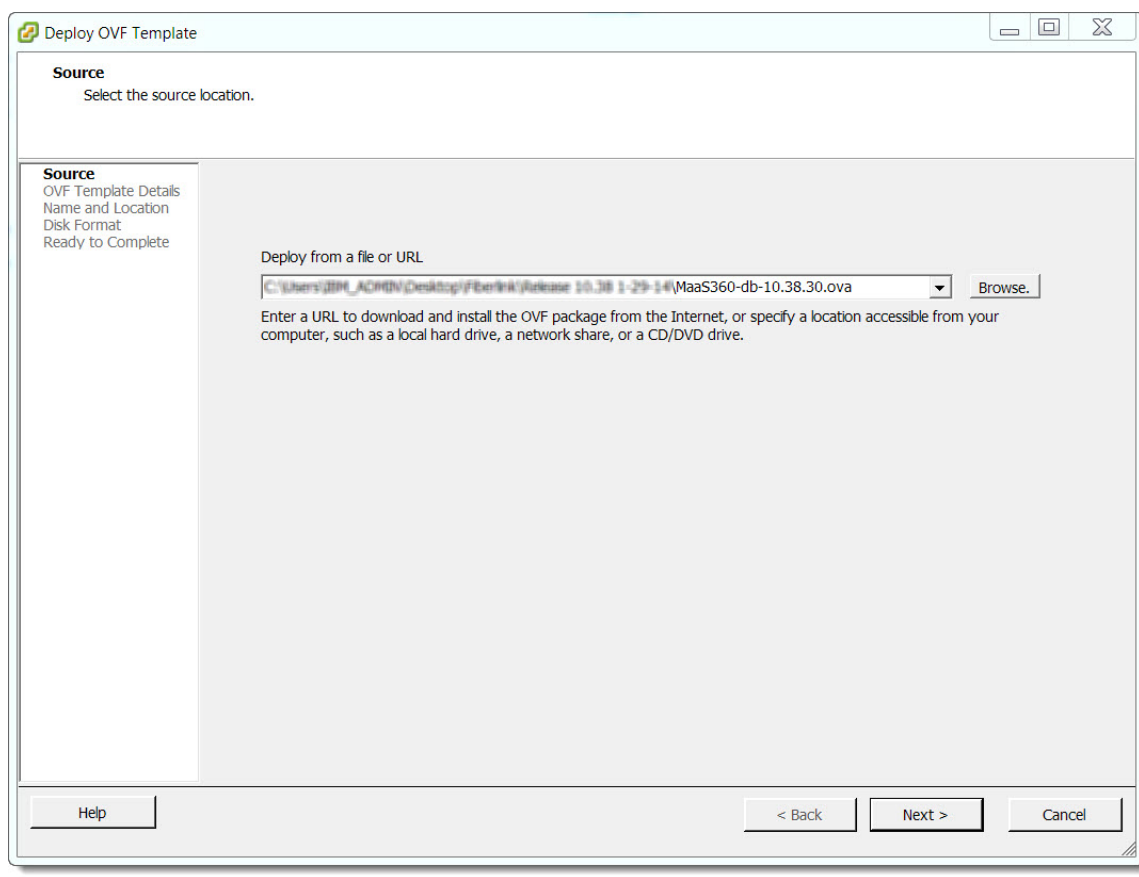
3. Enter a name for the Resource Pool and enter values appropriate for your VMware environment.



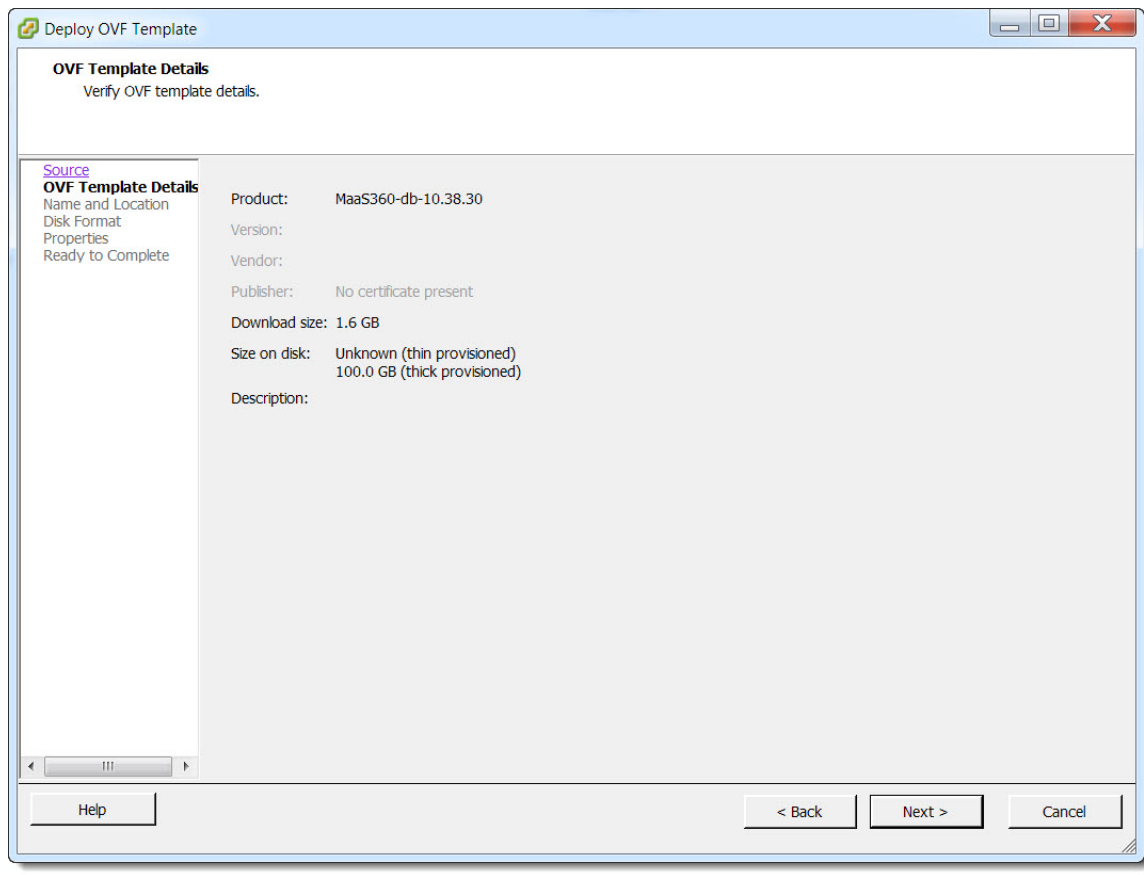
Virtual Appliance Deployment

Import the Database Virtual Appliance by performing the following procedure using the VMware vSphere client:

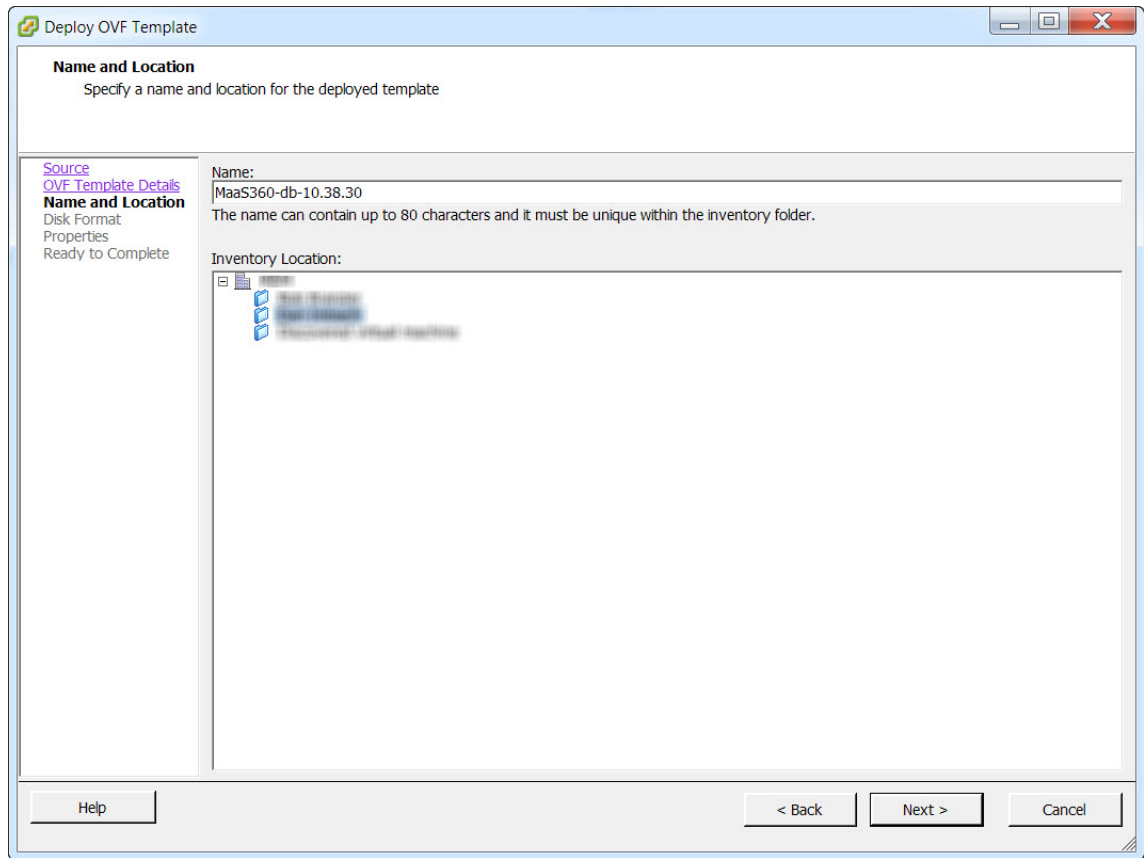
1. Select the relevant resource pool on the left navigation panel where you want the MaaS360 On-Premises Database vApp to be imported.
2. Select the **File** tab.
3. Select **Deploy OVF Template** from the menu. The **Deploy OVF Template** screen appears.



4. Click **Browse** and navigate to the location of the Database vApp OVA package on the **Source** screen.
5. Click **Next** to view the **OVF Template Details** screen. This screen lists details of the selected OVA package including file size, required disk storage, download size, product version, vendor name, etc.

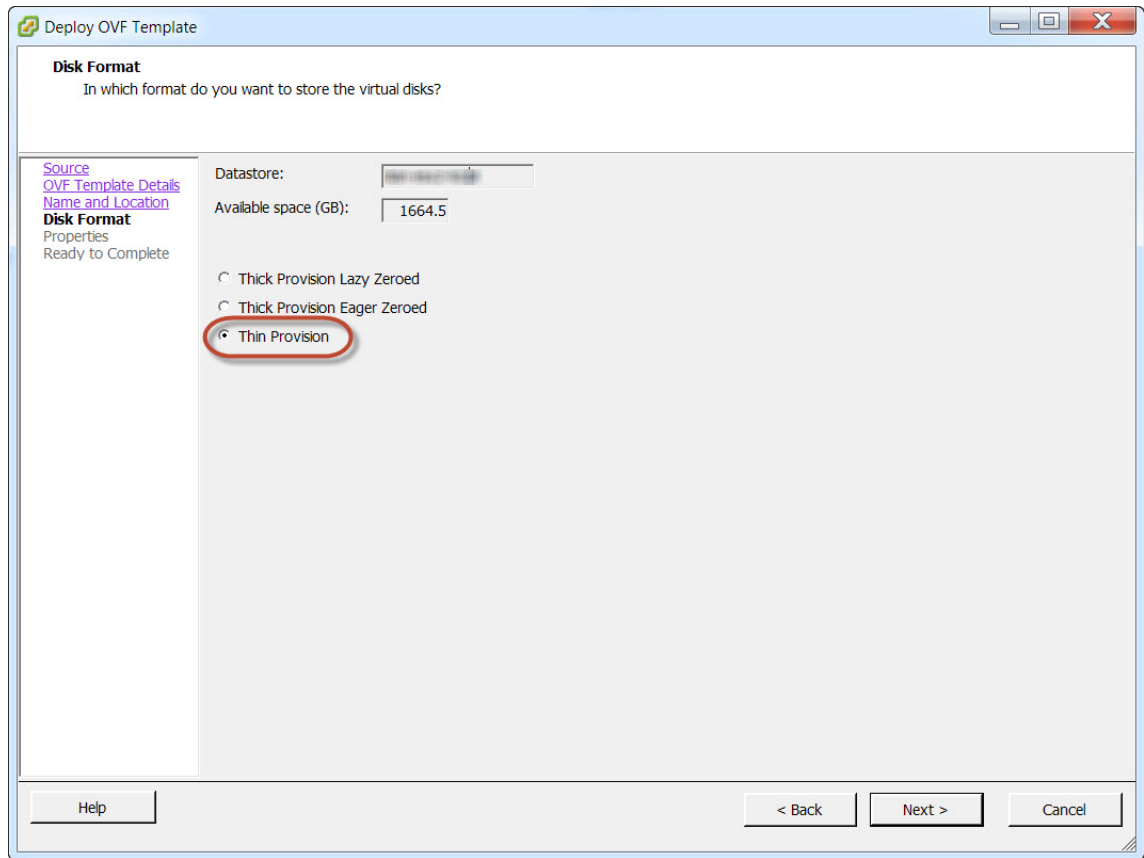


6. Click **Next**. The **Name and Location** window appears. The **Name and Location** window allows you to specify the name and location of the deployed template.



7. Enter a unique name of the template in the **Name:** field, for example MaaS360-db.
8. Select the folder in the **Inventory Location:** to which the appliance will be imported.
9. Click **Next** to view the **Disk Format** window. The **Disk Format** window displays the storage space details on the storage device for importing the appliance.

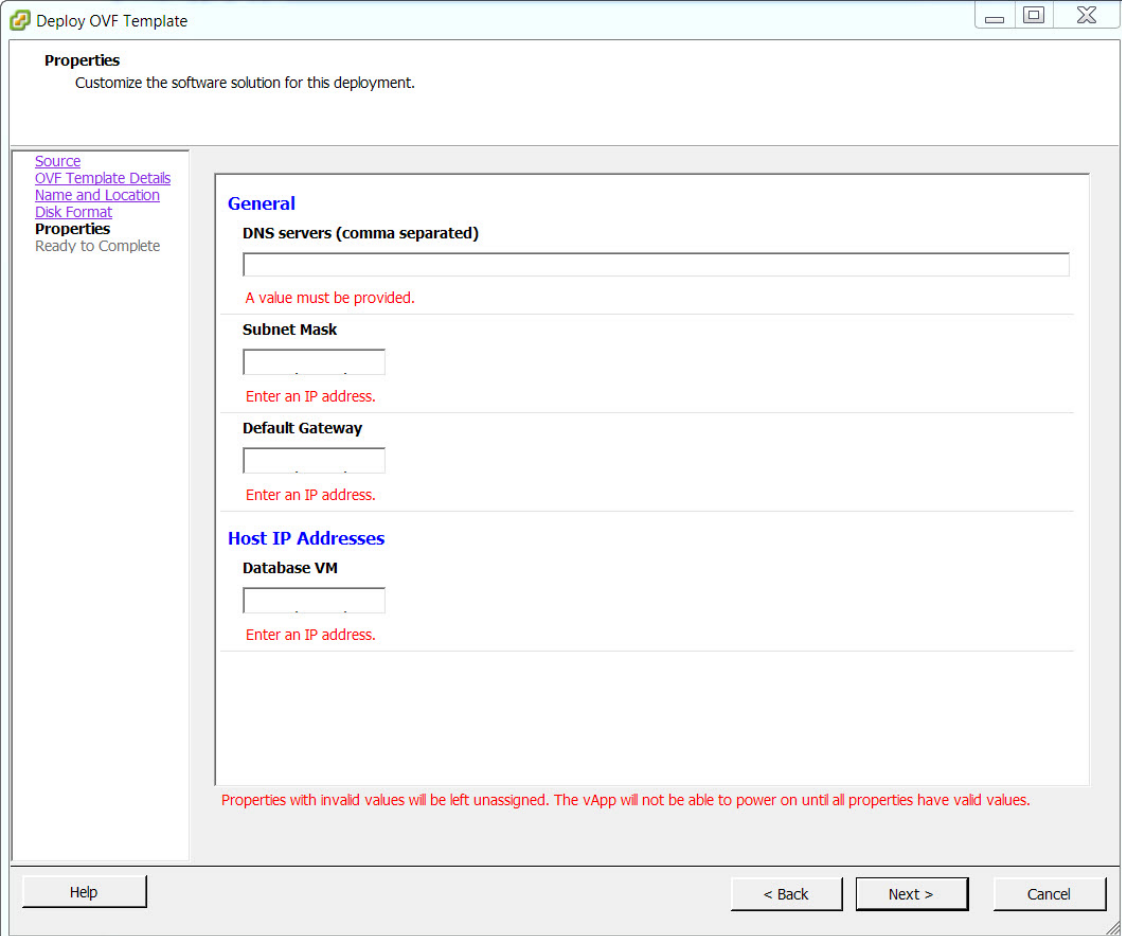
NOTE: It is recommended to use the Thin Provision disk format.



10. Click **Next** to view the **Properties** screen. The **Properties** screen allows you to define different variables for virtual appliance deployment.

Complete the following fields:

- **DNS Servers:** the IP address(s) of your DNS server(s). More than one DNS server address is separated by a comma.
- **Subnet Mask**
- **Default Gateway**
- **Database VM:** the IP address reserved for the database VM.



Deploy OVF Template

Properties
Customize the software solution for this deployment.

[Source](#)
[OVF Template Details](#)
[Name and Location](#)
[Disk Format](#)
Properties
Ready to Complete

General

DNS servers (comma separated)

A value must be provided.

Subnet Mask

Enter an IP address.

Default Gateway

Enter an IP address.

Host IP Addresses

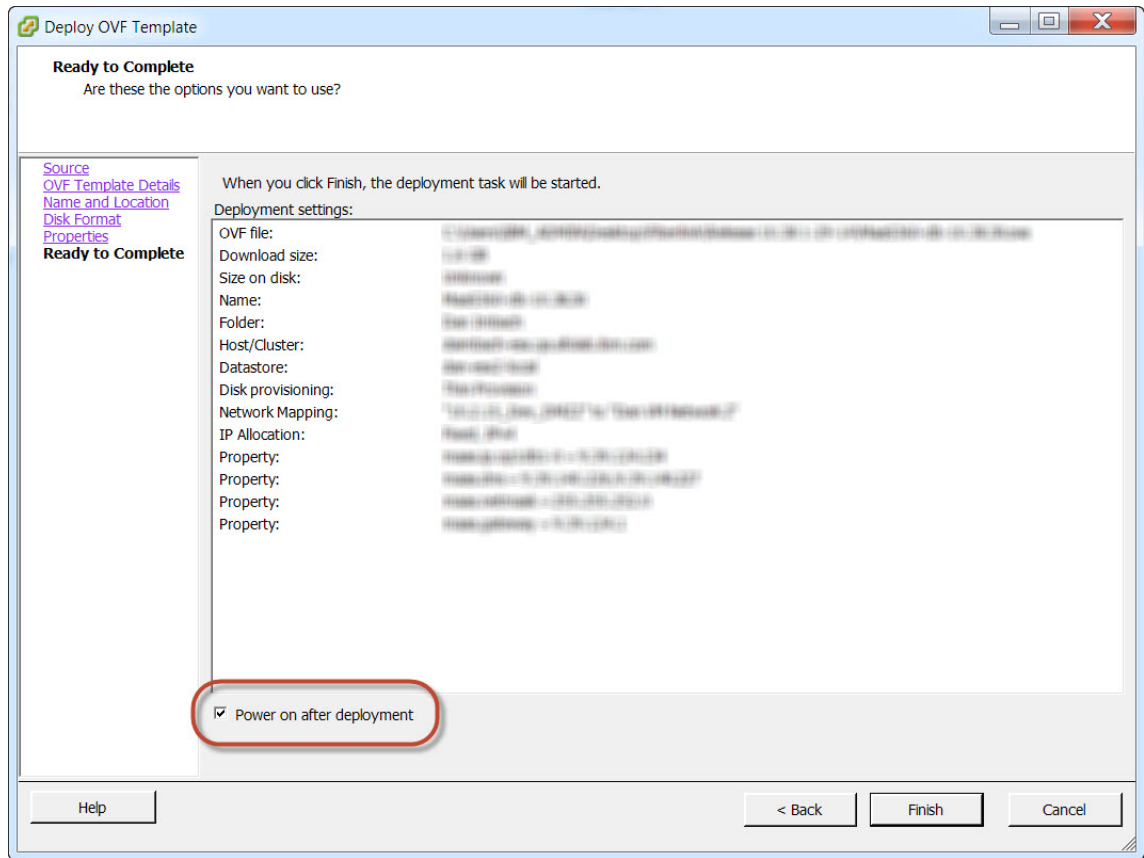
Database VM

Enter an IP address.

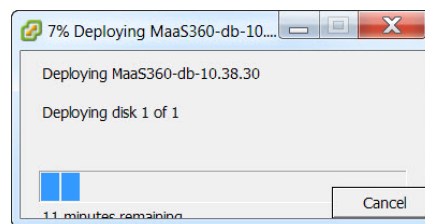
Properties with invalid values will be left unassigned. The vApp will not be able to power on until all properties have valid values.

Help < Back Next > Cancel

11. Click **Next** to view the **Ready to Complete** screen. This screen summarizes the different on-premises deployment settings. Confirm all of the settings before the vApp import starts. If required, use the **Back** button to change any settings.



12. Check Power on after deployment.
13. Click **Finish** to continue with the deployment process. A process bar appears defining the status and time pending for the appliance configuration to complete.



14. After the vApp is imported, verify that the virtual appliance is powered on. Verify that a virtual machine with the specified IP address is part of the vApp.



Database Setup

After the Database Virtual Application is deployed, the Oracle database must be deployed on the VM. The first step is to obtain and copy the database files to the Database VM. After they are placed in the correct directory, they must be unpacked and installed.

Depending on your Oracle license, you will be working with either v11.2.0.1.0 or v11.2.0.3.0.

NOTE: The password for the database virtual machine root login is MaaS360_Console.

1. If you have a trial license, or choose to use Oracle Database v11.2.0.1.0, download the two Oracle Database 11g Release 2 files for Linux x86-64, v11.2.0.1.0, from the [Oracle download site](#):
 - linux.x64_11gR2_database_1of2.zip
 - linux.x64_11gR2_database_2of2.zip
2. Otherwise, if you have the appropriate license, download the two Oracle Database v11.2.0.3.0 files from your designated Oracle download site.
3. Copy the Oracle Database files to the following folder on the database VM:
/u001/oradownload/<version>

NOTE: If you are unfamiliar with a method to transfer the files to the database VM, a sample method is provided in Database File Transfers Using WinSCP.

Database File Transfers Using WinSCP

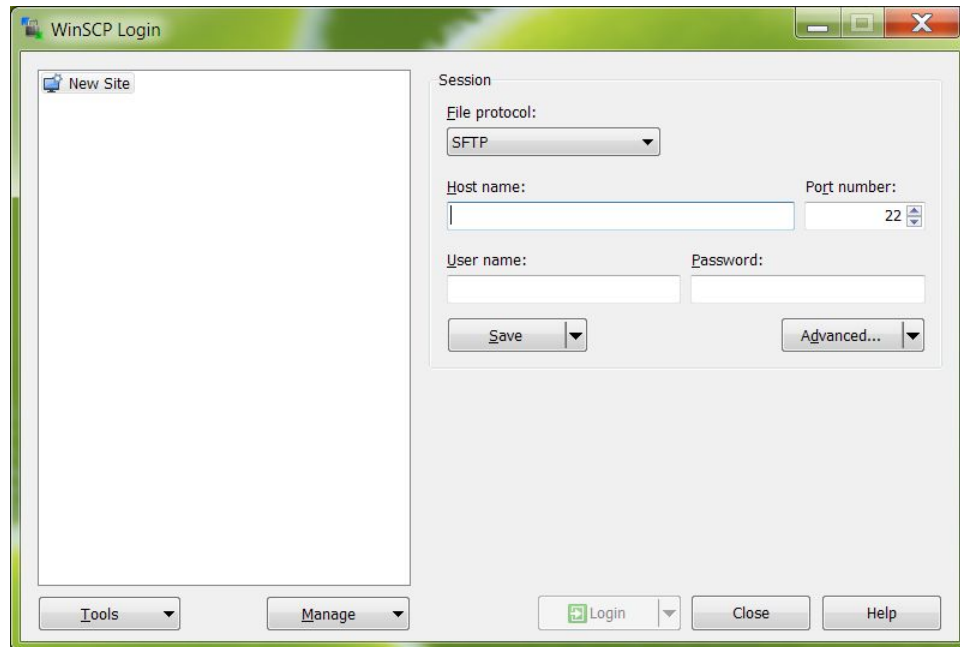
Copying the Oracle database files to the VM can be accomplished in several ways. If you are unfamiliar with this process, the following procedure can be used to accomplish this task. Do not feel obligated to perform these steps if you are familiar with this process or if your infrastructure allows a simpler method.

This procedure is performed using a Windows host. An open source utility, WinSCP, must be downloaded from the [WinSCP Download Page](#) and installed. In addition, the Windows host should contain the Oracle Database files.

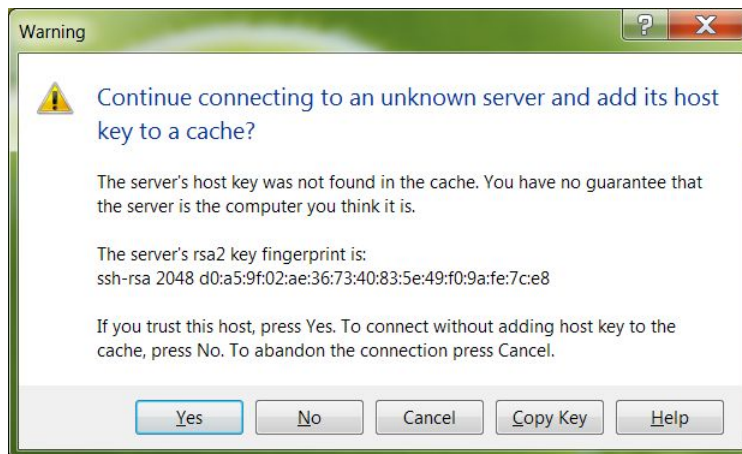
Copy Database Files to the Database VM

With remote login enabled on the Database VM, WinSCP is used to transfer the database files from your Windows host.

1. Open WinSCP.
2. Enter the following information:
 - File Protocol: SFTP
 - Host Name: the hostname or IP of the database VM.
 - Port Number: 22
 - User name: root
 - Password: MaaS360_Console



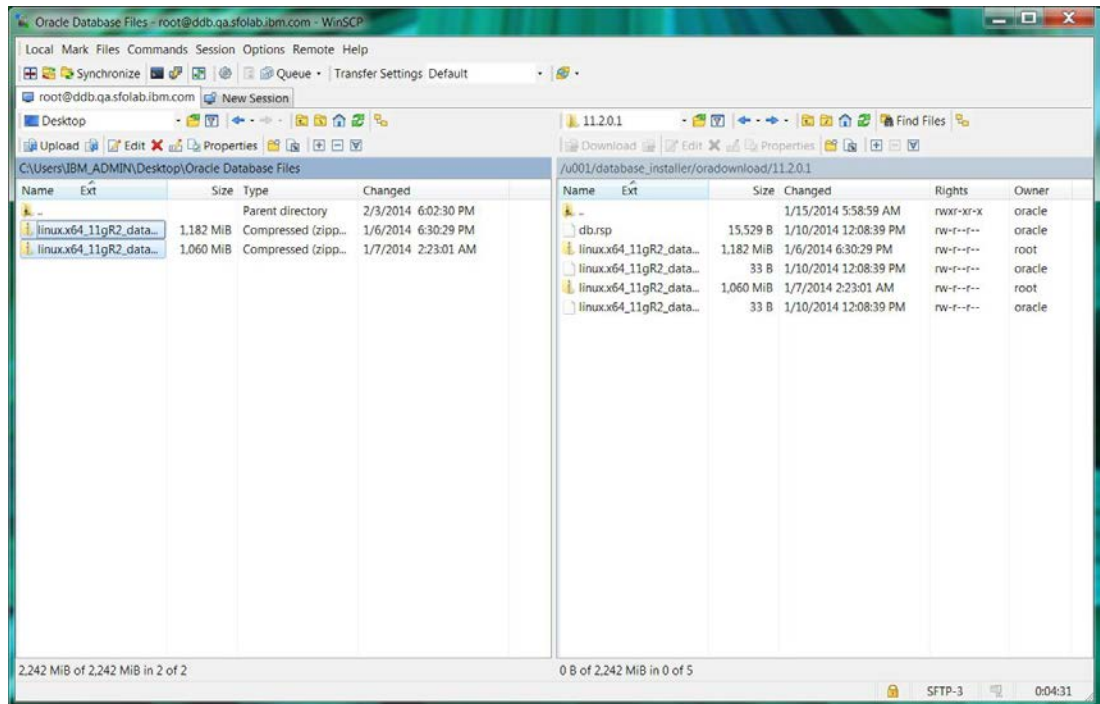
3. Click Login.
4. You may be prompted to save the host key. Click Yes.



5. In the left pane of WinSCP, navigate to the location on your Windows computer containing the Oracle database files:
 - linux.x64_11gR2_database_1of2.zip
 - linux.x64_11gR2_database_2of2.zip

NOTE: If you are using Oracle Database v11.2.0.3.0, you will be working with different files.

6. In the right pane, navigate to the /u001/database_installer/oradownload folder by double clicking the oradownload shortcut.
7. Select the two database files and drag and drop them from the Windows computer to the correct database VM folder, either 11.2.0.1 or 11.2.0.3.



8. Close WinSCP and terminate the session when prompted.

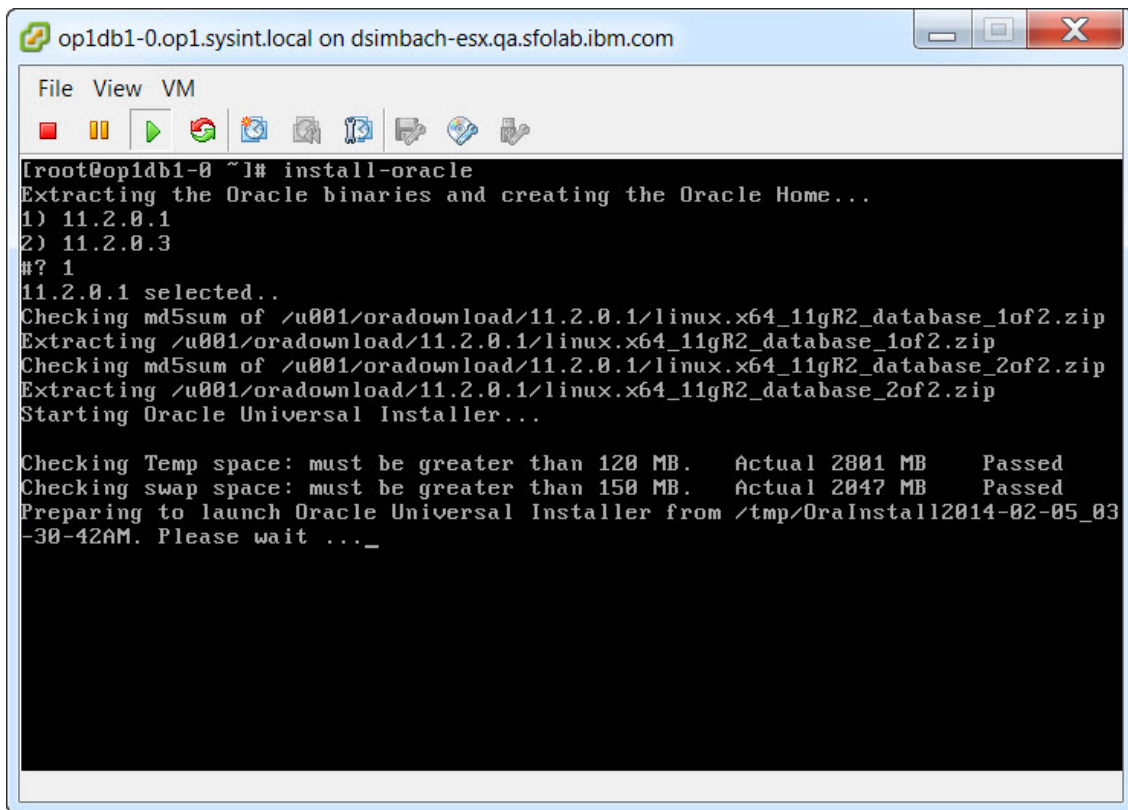
Install the Database

With the two Oracle database files transferred to the database VM, the next step in the process is to install the database.

Perform the following steps on the database VM console:

1. Log in to the VM with the username and password, if necessary.
2. Type the following command from any location:

```
install-oracle
```

```
op1db1-0.op1.sysint.local on dsimbach-esx.qa.sfolab.ibm.com
File View VM
[root@op1db1-0 ~]# install-oracle
Extracting the Oracle binaries and creating the Oracle Home...
1) 11.2.0.1
2) 11.2.0.3
#? 1
11.2.0.1 selected..
Checking md5sum of /u001/oradownload/11.2.0.1/linux.x64_11gR2_database_1of2.zip
Extracting /u001/oradownload/11.2.0.1/linux.x64_11gR2_database_1of2.zip
Checking md5sum of /u001/oradownload/11.2.0.1/linux.x64_11gR2_database_2of2.zip
Extracting /u001/oradownload/11.2.0.1/linux.x64_11gR2_database_2of2.zip
Starting Oracle Universal Installer...

Checking Temp space: must be greater than 120 MB.   Actual 2801 MB   Passed
Checking swap space: must be greater than 150 MB.   Actual 2047 MB   Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall12014-02-05_03-30-42AM. Please wait ..._
```

3. When the procedure is complete, type the following command:

```
install-databases
```

```

op1db1-0.op1.sysint.local on dsimbach-esx.qa.sfolab.ibm.com
File View VM
Removing read,write,execute permissions for world.

Changing groupname of /u001/app/orainventory to dba.
The execution of the script is complete.
Check /u001/app/oracle/product/11.2/db/install/root_op1db1-0_2014-02-05_03-32-57
.log for the output of root script
/root
[root@op1db1-0 ~]# install-databases
Setting installing the MaaS360 Databases using dbca
Oracle version 11.2.0.1 detected.
Copying over the clone and configuration files to their expected locations ..
Creating the MaaS360 Databases ...

Restoring and starting the edw Database ..

Copying database files
1% complete
3% complete
11% complete
18% complete
26% complete

```

- Verify that the installation succeeded by looking at the final line. It should read "Done."

```

op1db1-0.op1.sysint.local on dsimbach-esx.qa.sfolab.ibm.com
File View VM
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=op1db1-0.op1.sysint.local)(PORT=1521)))

Connecting to (DESCRIPTION=(ADDRESS=(HOST=op1db1-0)(PORT=1521)(PROTOCOL=TCP)))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 11.2.0.1.0 - Production
Start Date           05-FEB-2014 03:40:31
Uptime               0 days 0 hr. 0 min. 0 sec
Trace Level          off
Security             ON: Local OS Authentication
SNMP                 OFF
Listener Parameter File /u001/app/oracle/product/11.2/db/network/admin/listener.ora
Listener Log File    /u001/app/oracle/admin/diag/tnslnr/op1db1-0/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=op1db1-0.op1.sysint.local)(PORT=1521)))
The listener supports no services
The command completed successfully
End of changes. Database restore complete.
Done.
[root@op1db1-0 ~]# _

```